Key to Icons


Web site.*


Memorandum of understanding, memorandum of agreement, or interagency agreement.


Reference document, such as a manual, book, or published article.


Permit or application for a permit, approval or certification.

440.01 Introduction

This section covers policy and procedures related to energy consumed in the operation of vehicles and maintenance of facilities, and energy invested in construction activities as well as resources such as materials used in construction.

(1) Summary of Requirements

Energy may be addressed in NEPA/SEPA documents in a section describing energy and fuel consumption. It is also addressed in the "Irreversible and Irretrievable Commitment of Resources" section, which discusses the commitment of natural, physical, human, and fiscal resources, including fossil fuels, labor, and highway construction materials (see **Section 480**).

According to FHWA technical guidance, for large-scale projects with potentially substantial energy impacts, the draft EIS should discuss the major direct and/or indirect energy impacts and conservation potential of each alternative. The final EIS should include conservation measures to be included in the preferred alternative. For most projects, only general construction and operational energy requirements and conservation potential impacts need to be discussed.

WSDOT has no other specific requirements for addressing energy issues. For most projects, a Discipline Report is not required.

Unless reduction or minimization of energy consumption is a project goal, such as in mass transit or commuter travel enhancement projects, energy consumption is typically not a key decision making criterion. More often other project benefits such as reduction of congestion, improved travel time, and improvements in level of service are considered as important transportation project goals and reduction of energy consumption is a more implicit benefit.

* Web sites and navigation referenced in this section are subject to change. For the most current links, please refer to the online version of the EPM, available through the ESO home page: http://www.wsdot.wa.gov/eesc/environmental/

(2) Abbreviations and Acronyms

None.

(3) Glossary

None.

440.02 Applicable Statutes and Regulations

(1) National Environmental Policy Act/ State Environmental Policy Act

The National Environmental Policy Act (NEPA), 42 USC Section 4231, requires that all actions sponsored, funded, permitted, or approved by federal agencies undergo planning to ensure that environmental considerations such as impacts related to hazardous materials are given due weight in project decision-making. The State Environmental Policy Act (SEPA), mandates a similar procedure for state and local actions. Federal implementing regulations are at 23 CFR 771 (FHWA) and 40 CFR 1500-1508 (CEQ) State implementing regulations are in WAC 197-11 and WAC 468-12 (WSDOT). For details see **Section 410** through **Section 412.**

(2) Other

None identified.

440.03 Policy Guidance

The Transportation Commission's Policy Catalog contains a specific policy on meeting environmental responsibilities related to energy: "Minimize, and avoid when practical, air, water and noise pollution; energy usage; use of hazardous materials; flood impacts; and impacts on wetlands and heritage resources from transportation activities."

The Commission also has a specific policy on use of non-renewable resources. Policy 6.3. acknowledges that present transportation systems and land use patterns, oriented to the single occupant vehicle, promote inefficient use of non-renewable energy resources.

The Commission's goal is to "improve the energy efficiency of the transportation system and reduce the consumption of and dependence upon non-renewable resources. The policy and action strategies are available from WSDOT's home page:

http://www.wsdot.wa.gov/

Click on Transportation Commission, then Reports and Plans, then Policy Catalog.

Or by direct link:

http://www.wsdot.wa.gov/commission/ReportsPlans/Catalog.pdf

In the future, the emission of greenhouse gases (such as carbon dioxide) that leads to global climate change may be considered a secondary impact from the construction of transportation infrastructure. Although emissions of carbon dioxide from the combustion of vehicle fuels/energy is currently unregulated, check with WSDOT's air quality unit for any additional regulations, policy changes, or environmental stewardship opportunities.

For additional information see the WSDOT web site at:

http://www.wsdot.wa.gov/Regions/Northwest/SpecialSvc/environmental/

Click on Air Quality, Acoustics and Energy.

Or directly at:

http://www.wsdot.wa.gov/Regions/Northwest/SpecialSvc/environmental/aae/default.htm

Also, see the USEPA web site at:

http://www.epa.gov/globalwarming/emissions/national/index.html

440.04 MOUs, MOAs, and IAs

None identified.

440.05 Technical Guidance

(1) Discipline Report

WSDOT has no formal Discipline Report for Energy at present. Following are guidelines for analyzing impacts on energy resources as part of an Environmental Assessment or Environmental Impact Statement.

(a) Affected Environment

Include existing energy consumption (if applicable).

(b) Impacts

Where the proposed project will cause no net increase in energy consumption, say so and briefly explain why. If the project will cause an increase in energy consumption, consider in terms of BTUs or quantities of fuel consumed:

- Direct energy consumed in operation of vehicles predicted to use the facility, compared to existing facility (if any). Identify pay-back period. Consider effects of increased or decreased smoothness of traffic flow.
- Energy consumed in maintenance of the facility, compared to existing facility (if any).
- Energy consumed in the region as a result of operation of the facility, compared to existing energy consumption. Consider effects of increased or decreased smoothness of traffic flow, vehicle miles traveled, and growth generated by the project.
- Impact on production of energy, if any.
- The combined impact of energy used during construction versus energy used (or saved) during operation. Does one affect the other? Are they substantial when added together?

(c) Mitigation

Describe:

- Mitigation measures and commitments during operation.
- Mitigation measures considered or available but not included, with reasons why.

(d) Construction Activity Impacts

All impacts associated with construction of the project are to be addressed in a Construction Activity Impacts section of the EIS. Provide the following information, as appropriate, for inclusion in that section.

Under "Impacts," consider temporary construction effects, such as:

- The impact on local fuel availability during construction.
- Energy resources needed and source of energy invested in construction activities and materials used in construction.
- The need to develop additional energy sources during construction.
- Any impact on production of energy.

Under "Mitigation," describe:

- Mitigation measures and commitments during construction.
- Mitigation measures considered or available but not included, with reasons why.

(2) FHWA Technical Advisory

FHWA Technical Advisory T6640.8A (October 1987) gives guidelines for preparing environmental documents, including specifically the sections on energy impacts. For most projects, the draft EIS should discuss the general construction and operational energy requirements and conservation potential of various alternatives under consideration.

For large-scale projects with potentially substantial energy impacts, the draft EIS should discuss the major direct and/or indirect energy impacts and conservation potential of each alternative. Direct energy impacts refer to the energy consumed by vehicles using the facility. Indirect impacts include construction energy and such items as the effects of any changes in automobile usage. The alternative's relationship and consistency with a State and/or regional energy plan, if one exists, should also be indicated.

The final EIS should identify any energy conservation measures that will be implemented as a part of the preferred alternative.

For details, see FHWA's home page:

http://www.fhwa.dot.gov/

Click on Legislation and Regulations, then FHWA Directives and Policy Memorandums, then FHWA Technical Advisories, then T6640.8A.

Or by direct link:

http://www.fhwa.dot.gov/legsregs/directives/techadvs/t664008a.htm

(3) USDOT Guidance on Fuel Consumption and Air Pollution

Evaluation of a project's effects on energy supply and demand may not be considered necessary because of the availability of fuel in a worldwide economy. However, the impacts of energy consumption can be estimated in terms of fuel consumption effects on air quality.

Refer to USDOT Order 5610.1C, Attachment 2, Page 12; and the following documents:

Energy Requirements for Transportation Systems, USDOT, June 1980;

Procedure for Estimating Highway User Costs, Fuel Consumption, and Air Pollution, USDOT, March 1980.

440.06 Permits

None.

440.07 Non-Road Project Requirements

The requirements to address energy requirements for non-road projects are assumed to be the same as for road projects.

440.08 Exhibits

None.